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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/758,958 | 01/11/2001 | Lee-Fang Wei | 52 | 9649 |

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LUCENT TECHNOLOGIES INC.
DOCKET ADMINISTRATOR
101 CRAWFORDS CORNER ROAD - ROOM 3J-219
HOLMDEL, NJ 07733

EXAMINER

HA, DAC V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2634

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DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,958

Applicant(s)

WEI, LEE-FANG

Examiner

Dac V. Ha

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 19-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 6-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4.5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 6-11, 13** are objected to because of the following informalities: the parameter "i" should be defined. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 12-18** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The steps for transmitting a signal are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.) When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated

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property (result) while the specification discloses at most only those known to the inventor. See MPEP Section 2164.08(a).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 3, 5** are rejected under 35 U.S.C. 102(b) as being anticipated by Price et al. (US 5,867,534) (hereinafter Price).

Regarding claim 1, Price teaches all the claimed subject matter “modulating a carrier wave ... carrier wave” in Figure 1, elements 1-6; Col. 3, line 47 to Col. 4, line 4; Col. 4, lines 34-40.

Regarding claim 3, Price further teaches the claimed subject matter “wherein ... optical carrier” in Col. 3, line 50.

Regarding claim 14, see claim 2 above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2, 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of Price et al. (US 6,426,821).

Regarding claim 2, Price teaches all the claimed subject matter in claim 2, as stated above, except for the claimed subject matter "wherein ... symbols". However, Price et al. teaches that the utilizing NRZ of modulating data stream onto carrier in widely known (Col. 2, lines 5-16). Thus, the claimed subject matter "wherein ... symbols" would have been optional to one skilled in art.

Regarding claim 4, see claim 2 above.

8. **Claims 12, 15, 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of McEwen et al. (US 6,366,418) (hereinafter McEwen).

Regarding claim 12, Price teaches all the claimed subject matter in claim 12 "a modulator ... a second stream" in Figure 1, elements 1-6; Col. 3, line 47 to Col. 4, line 4; Col. 4, lines 34-40, except for the claimed subject matter "each symbol of the second ... than one". Price teaches in an embodiment the generation and utilization of duobinary signal (or partial response) in which the signal SM comprises of a "present symbol" and an immediate previous one (not shown by Price, however, it is the characteristic of duobinary signal). However, McEwen teaches that partial response can be modified to utilize more of the previous symbols (Col. 1, lines 49-62) and widely used in the art. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to optionally use the modified partial response in Price for further bandwidth efficiency, however, at the cost of power.

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Regarding claim 15, Price further teaches the claimed subject matter "wherein ... optical carrier" in Col. 3, line 50.

Regarding claim 17, the claimed subject matter "wherein ... odd" would have been design specific.

Regarding claim 18, see claim 5 above.

9. **Claims 14, 16**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of McEwen as applied to claim 12 above, and further in view of Price et al.

Regarding claim 14, Price and McEwen teach all the claimed subject matter in claim 14, as stated above, except for the claimed subject matter "wherein ... symbols". However, Price et al. teaches that the utilizing NRZ of modulating data stream onto carrier in widely known (Col. 2, lines 5-16). Thus, the claimed subject matter "wherein ... symbols" would have been optional to one skilled in art.

Regarding claim 16, see claim 14 above.

Allowable Subject Matter

10. **Claims 6-11** are allowed.

11. **Claim 13** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Yonenaga et al. (US 5,543,952) disclose Optical Transmission System.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a horizontal line underneath.

Dac V. Ha
Examiner
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